

## EE 488 - COURSE SYLLABUS

SPRING 2016

Instructor : K. Dudeck

Office : L-104

Hours : Hours are posted, additional hours by appointment.

EE 488: Power Systems Analysis I (3) Fundamentals, power transformers, transmission lines, power flow, fault calculations, power system controls.

Prerequisites: EE 387 or EE 485.

Text: Glover, Power Systems Analysis and Design, 5<sup>th</sup> Edition, Brooks/Cole Publishing Co. Publishing, 2011. ISBN 9781111425777 (Recommended)

### Policies:

1. Students are expected to review designated reading material when instructed.
2. Students are expected to complete the assigned homework problems when assigned. Selected problems will be turned in for grade.
3. Regular class attendance is expected.
5. Academic integrity is expected. Cheating will result in an issued zero for the said exam or quiz. See attached PSU policy.
7. Grading: Grading is strictly on a point system.

(3) EXAMS :	60% (20% Each)
Assignments :	30%
Final Project :	10%
TOTAL :	<hr/> 100%

Grading Scale:  $A \geq 90\%$  ;  $B+ \geq 87\%$  ;  $B \geq 80\%$  ;  $C+ \geq 77\%$   $C \geq 70\%$ ,  $D \geq 60\%$

### 8. Topics

- 1) Intro Review of Single and Three Phase Power (1.5 week)
- 2) Laplace Transforms (1.5week)
- 3) Power Transformers and Per Unit (3 weeks) Exam I
- 4) Transmission Line Parameters (3 weeks)
- 5) Transmission Line Analysis (2 weeks) Exam II
- 6) Power Flow (1.5 weeks)
- 7) Symmetrical Components and Faults (2 weeks) Exam III

## 9. Homework Problems

Chapter 2: 7, 8, 9, 27, 38, 43, 44, 48

LaPlace Handout: 1, 2, 3, 4, 5

Chapter 3: 12, 20, 22, 23, 24, 41, 42, 51, 53, 54

Chapter 4: 3, 7, 13, 23, 25, 32, 36

Chapter 5: 2, 14, 15, 31

Chapter 6: 25, 26, 28, 28a

Chapter 7: 1, 2

Chapter 8: 10, 14, 15

### **Academic Integrity at Penn State : A Statement by the Council of Academic Deans**

Academic integrity mandates the pursuit of teaching, learning, research, and creative activity in an open, honest, and responsible manner. An academic community that values integrity promotes the highest levels of personal honesty, respect for the rights, property, and dignity of others, and fosters an environment in which students and scholars can enjoy the fruits of their efforts. Academic integrity includes a commitment neither to engage in acts of falsification, misrepresentation, or deception, nor to tolerate such acts by other members of the community.

Academic integrity is a fundamental value at Penn State. It must be at the heart of all our endeavors and must guide our actions every day as students and as members of the faculty, administration, and staff. Because we expect new and continuing members of the University community to meet the high standards that are the foundation of a Penn State education, this message must be clear and reinforced frequently.

The primary responsibility for supporting and promoting academic integrity lies with the faculty and administration, but students must be active participants. A climate of integrity is created and sustained through ongoing conversations about honesty, trust, fairness, respect, and responsibility and the embodiment of these values in the life of the University. Students and faculty should contribute actively to fostering a climate of academic integrity in all their scholarly activities, through discussions in first-year seminars and in other courses, and

through involvement in college Academic Integrity Committees. The University community should be continually mindful of the need to preserve academic integrity even as technology changes methods of information access and use.

Colleges will provide all faculty members and teaching assistants information about appropriate ways to promote academic integrity and handle dishonesty cases. Faculty members and graduate assistants must make clear their expectations about academic integrity in every course they teach.

As members of the Council of Academic Deans, we strongly support efforts to enhance academic integrity at Penn State. We will provide individual and collective leadership to strengthen further the University's commitment to the highest standards of academic integrity.

August 29, 2000